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ABSTRACT

Student mobility is a topic that frequently surfaces in discussion about the problems of urban schooling, but it is one that tends to fade from the agenda as discussion continues. Using data from the Chicago (Illinois) public elementary schools, this paper first describes the extent of urban school instability. Many schools, in fact, do not have stable cohorts of students whose progress they can track over time. The causes of this high level of instability, connected both to residential mobility and to more school-related reasons, are then explored. Distinctive patterns emerge that reveal clusters of schools that are closely tied by the students they exchange from year-to-year. Given this context, the impact of mobility on students, schools, and urban education more generally is examined. Recent school reform efforts that center on promoting greater local school autonomy implicitly assume that students will attend a specific school consistently enough that the schools can "make a difference" in their achievement. In the unstable urban context, however, even improving schools lose their accomplishments as students transfer, and mobile students forfeit the benefit of continuity of school services. Thus, not only does mobility have an impact on individual students who are changing schools, it has deep (though often hidden) consequences for the schools these students attend and for the systemic changes intended by local school reform. (Contains 7 figures, 9 tables, and 51 references.) (Author/SLD)

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PATTERNS OF URBAN STUDENT MOBILITY AND LOCAL SCHOOL REFORM

Technical Report

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PATTERNS OF URBAN STUDENT MOBILITY AND LOCAL SCHOOL REFORM

Technical Report

David Kerbow
University of Chicago

Report No. 5

October 1996

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The Center

Every child has the capacity to succeed in school and in life. Yet far too many children, especially those from poor and minority families, are placed at risk by school practices that are based on a sorting paradigm in which some students receive high-expectations instruction while the rest are relegated to lower quality education and lower quality futures. The sorting perspective must be replaced by a "talent development" model that asserts that all children are capable of succeeding in a rich and demanding curriculum with appropriate assistance and support.

The mission of the Center for Research on the Education of Students Placed at Risk (CRESPAR) is to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk. The work of the Center is guided by three central themes — ensuring the success of all students at key development points, building on students' personal and cultural assets, and scaling up effective programs — and conducted through seven research and development programs and a program of institutional activities.

CRESPAR is organized as a partnership of Johns Hopkins University and Howard University, in collaboration with researchers at the University of California at Santa Barbara, the University of California at Los Angeles, University of Oklahoma, University of Chicago, Manpower Research Demonstration Corporation, WestEd Regional Laboratory, University of Memphis, and University of Houston-Clear Lake.

Abstract

Student mobility is a topic that frequently surfaces in discussions about the problems of urban schooling. Surprisingly, it tends to fade from the agenda as discussion turns toward reform initiatives and school restructuring. Student movement, however, penetrates the essential activity of schools — the interaction of teachers and students around learning.

Using data from Chicago public elementary schools, this paper first describes the extent of urban school instability. Many schools, in fact, do not have a stable cohort of students whose progress they can track over time. Second, the causes of this high level of instability, connected both to residential mobility and to more school-related reasons, are explored. Distinctive patterns emerge that reveal clusters of schools which are closely tied by the students they exchange from year-to-year. Third, given this context, the impact of mobility on students, schools, and urban education more generally is examined.

Recent school reform efforts that center on promoting greater local school autonomy implicitly assume that students will attend a specific school consistently enough that the school can "make a difference" in their achievement. In the unstable urban context, however, even improving schools lose their accomplishments as students transfer, and mobile students forfeit the benefit of continuity of school services. Thus, not only does mobility impact individual students who are changing schools, it has deep (though often hidden) consequences for the schools these students attend and for the systemic changes intended by local school reform.

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Introduction

Many of us think of schools as following a standard academic routine that we recall from our own education. Teachers begin each fall with a group of students assembled to learn together for the next nine months. They regularly evaluate students' progress and adjust their instruction based on this information. End-of-year achievement data are then used for planning instruction and curriculum for the following year.

This portrait of routine classroom life, however, is grossly inaccurate for many urban schools. Students are mobile and schools are unstable. For example, of all sixth grade Chicago students enrolled in 1994, only 38 percent had attended the same school throughout their elementary years. Thirteen percent of these students, in fact, had attended four or more schools during this six-year period. In the *typical* Chicago elementary school, only 50 percent of its students are still enrolled at the school after a three-year period. In more extreme cases, schools lose over two-thirds of their students. In a significant sense, these schools are no longer the same organization. They have the same physical building and the same grade-level structure, but their most essential feature — the students — has almost completely changed.

This level of mobility has potentially deep and pervasive consequences for the students involved and more broadly for the classrooms and schools they attend. Most immediate for children, changing schools is almost certain to create some disjuncture in their learning experience (Alexander, Entwisle, & Dauber, 1994; Ingersoll et al., 1989; Kerbow, 1995b). Learning difficulties, in fact, may be accentuated if students enter classrooms that are at a decidedly different point in the curriculum than their previous schools. For classrooms, instructional routines may be disrupted. Teachers may adopt discrete teaching modules, for example, rather than more integrative instructional approaches in order to accommodate the instability of students (Lash & Kirkpatrick, 1990). Such practices affect not only students who are changing schools but also the stable students in these highly mobile contexts. Coordinating subject emphases across grades also becomes more problematic as information on which to base these curricular decisions is often unavailable for newly enrolled children. At a more organizational level, administrative resources are required to incorporate new students into existing classrooms. This demand competes with other fundamental concerns about coordinating the work environment and developing school community (Kerbow, 1993). In sum, mobility creates a complex matrix of issues that span student learning, classroom instruction, and school organization.

Moreover, in the context of recent school reform efforts that focus on promoting greater local school autonomy, student instability has potentially far-reaching implications. This "second wave" of reform (Elmore et al., 1990; Kirst, 1988; Passow, 1989) is based, at least partially, on the assumption that given sufficient authority and control of their resources, local schools will be able to more appropriately respond to the needs of their students. A further, perhaps more basic supposition, is that students will attend a specific school consistently enough so that such a refocusing of services can "make a difference" in the achievement of *those* students. However, in the unstable urban context, even improving schools lose their accomplishments as students transfer, and mobile students forfeit the benefit of continuity of school services. Thus, not only does mobility impact individual students, it has deep (though often hidden) consequences for the systemic changes intended by school reform policy.

Although student mobility is recognized by urban administrators and educational researchers as a serious problem, minimal research has been undertaken on this topic and few innovative solutions have been proposed. Some attention has been given to the impact on the learning of mobile students, but the perhaps more profound effect of instability on schools has been largely ignored. Moreover, a systematic framing of the policy issues for school restructuring and school reform in urban centers is lacking.[1]

Using data from Chicago public elementary schools, this paper explores the impact of mobility on students, schools, and urban education more generally.[2] The factors that drive mobility in this urban setting are likely to overlap considerably with those in other large metropolitan areas. The broad policy implications raised by mobility in connection with Chicago school reform will also be particularly pertinent to other decentralization efforts nationally. Thus, although Chicago provides the primary source of data, the implications should be instructive for many other moderate to large urban districts.

This paper begins by exploring the extensiveness of mobility at the school level. Before considering mobility's impact on students and schools, we need a clearer sense of its magnitude — exactly how unstable are urban schools and what are productive approaches to measuring this instability. The next section probes the causes of student movement. This includes an understanding of the characteristics of those who move in the system, reasons that prompt this movement, and patterns of connection among the schools involved. The following section turns to the effects of mobility both on the academic learning of those students who are moving and on the classrooms and schools that have to cope with this instability. Finally, the last section takes up the policy implications that emerge from the analysis.

Defining the Problem: How Pervasive is Student Mobility?

School districts typically report some form of "mobility rate." These rates, however, are not often comparable across districts because different formulas as well as time frames are used for their calculation (Ligon & Paredes, 1992). The most commonly used calculation includes both the number of students who leave a school and the number who enroll after the beginning of the year. These numbers are summed and then divided by the total number of students attending the school in order to convert mobility to a percentage of enrollment.[3]

This approach to "counting" mobility introduces certain ambiguities. Very different phenomena may be at work in schools with the same mobility rate. A school that loses a number of its students who are replaced by new transfers during the year may have the same rate as a school that loses a small percentage of its students but gains in enrollment during the year. In the first scenario, a continual flow of new students move through the school's classrooms. There may not even be a core group of stable students who remain over several years. The second school is more likely to have a consistent base of students who are joined by those newly enrolled. This pattern of high stability coupled with some "in-mobility" may, in fact, constitute an indirect measure of a school's "attractiveness." In a market sense, the school is maintaining its current clientele and attracting new students.

Therefore, to gain a clear *meaning* of the level of mobility in a school, it is important to separate the entry and exit phenomena from stable participation. Conceptually, three interrelated statistics can be computed: an "in-mobility" rate that is the percentage of students that are new to the school; an "out-mobility" rate that is the percentage of students who leave; and, finally, a "stability" rate that is the percentage of students who remain in a school from one year to the next. For simplicity, we will focus attention on the last of these. It represents the core of students in a school to which entry and exit will either add or subtract. The stability rate also has the advantage of a clear interpretation as well as being at least a partial indicator of the potential "attractiveness" of a school.[4]

Table 1 displays stability rates for Chicago elementary schools between September 1993 and September 1994.[5] The stability percentages for Chicago are strikingly low. On average, 80 percent of a school's students remain from year to year. Not surprisingly, however, these rates vary considerably across schools. At the lower end of the scale are

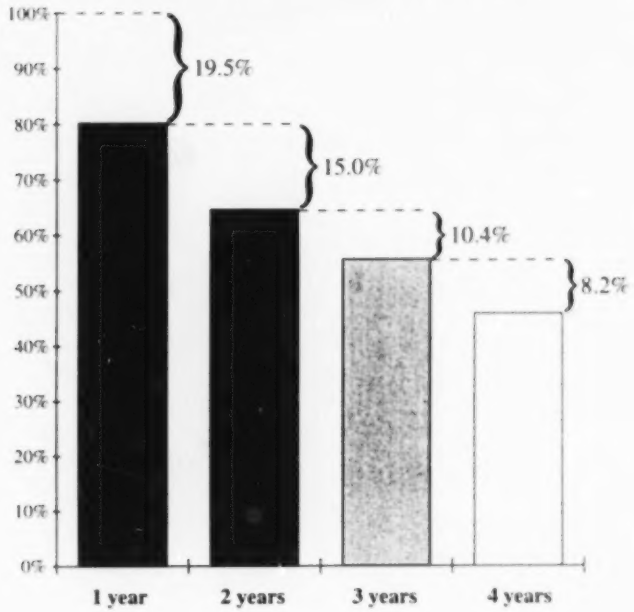
schools that lose approximately one-third or more of their students. Eleven percent of the schools fall into this category (i.e., they have a stability rate of less than 70 percent). These schools, on average, lose ten students each year from a classroom of thirty. Another 36 percent of the schools lose more than one-fifth of their students from the previous year. At the other end of the scale, a relatively small number of elementary schools maintain over 90 percent of their students: seven percent of the schools have such a stable environment.

Table 1
One-year School Stability Rates
September 1993 to September 1994

Stability Rate	% of Elementary Schools
< 60	2.6%
60-65	2.8%
65-70	5.5%
70-75	13.0%
75-80	22.9%
80-85	28.7%
85-90	17.4%
90-95	6.5%
95-100	0.6%

This portrait of instability becomes even more apparent when we consider the persistence of students in the same school over longer periods of time. Ideally, a stable core of students would be present in the school. These students could be followed so that their progress may be evaluated and so that the school may plan for their continued learning. Unfortunately, for the majority of Chicago elementary schools, their "core" of students disappears over time. Figure 1 displays the stability of a cohort of Chicago students in a typical elementary school over a four-year time period. In the first year, 19.5 percent exit. Each successive year, an additional percentage of the originally enrolled students leave. Although the percentage who leave drops from year-to-year, the cumulative effect is clear. Only 46 percent of the students who began in the school are still present in its classrooms. Thus, after four years, the typical Chicago school actually has more "new" students than continuing students from the first year. In schools that are more extreme cases, the four-year stability rate falls to below 30 percent.

Figure 1
Student Stability over Time:
A Typical Chicago Elementary School



These data reveal that urban schools, even in the same district, operate under very different conditions. Some maintain a stable cohort of students over time whom they can educate and whose progress they can document. Others have only a short period to affect their students before they leave their classrooms for other schools. The movement of individual students, taken collectively, creates many schools that do not, by any practical definition, serve a cohort of children.

What Do We Know about the Causes of Student Mobility?

The United States population is highly mobile. Throughout the decade of the eighties, between 16 and 20 percent of the population changed residences annually. The figures for elementary school-age children mirror these general rates. In 1990-1991, slightly over 17 percent of children age 5 to 9 moved, as did 14 percent of children age 10 to 14 (U.S. Bureau of the Census, 1992). These percentages, however, are dwarfed by the urban school instability described above. Issues of neighborhood and community poverty likely contribute to these statistics. Attempts by families to secure better housing, a safer environment, or better educational settings for their children almost certainly play a role as well. Without further information to sort out these various influences, the default assumption is often that student mobility is an intractable problem for schools, caused mainly by factors outside of their control.

A broad description, however, of the characteristics of the students who move through the system and the patterns of this movement between schools may prove this assumption to be incorrect in important ways. Urban schools may themselves be inadvertently contributing to the problem. Families may also be moving their children for reasons that can be influenced by providing parents with additional information about schools or by other direct policy decisions by the district. It is this fundamentally descriptive task of understanding who moves, why, and to where, that is the focus of this section.

Tracking Individual Student Movement Between Schools

The levels of school instability, as dramatic as they are in some cases, in fact hide much of the "activity" in urban districts. Mobility histories of individual students reveal that a significant portion of the annual instability of a system is actually related to the movement of a small percentage of students who change schools several times. These students may move to a new school both during the school year as well as over the summer months and, in extreme cases, repeat this pattern again the following year.

In order to explore this phenomenon, we examined the movement histories of a cohort of students who were sixth graders in the Chicago public elementary schools during the spring of 1994.[5] We followed their school enrollment history retrospectively for a two-year period. The statistics are quite revealing. Over 36 percent of these students had experienced at least one change of school during the two years. Multiple moves were also

prominent; 13 percent of the students attended three or more schools. For the five percent of students who attended four or more schools in the two-year period, multiple changes occurred during at least one of those years.[7]

These data also contain additional information about the source of instability in the school district. Specifically, we are able to identify mobility that was from one Chicago public school to another and mobility that was due to students who transferred from outside of the system. The results, presented in Table 2, show that Chicago school mobility is overwhelmingly an internal phenomenon. The first column of the table displays transfers that occurred over the summer of 1993. Of these students, 87 percent moved from one Chicago public school to another. The remaining students who moved from a school outside of the system can be further divided into two groups: those who were entering the system for the first time and those who had left the system for a period of time and were now returning.[8] Only seven percent of the transferring students were completely new to the system.

Table 2
Sources of Student Transfers
Over Summer 1993 and During 1993-1994 Academic Year

	% of Students	
	Summer 1993	1993-1994 School Year
From another CPS school	86.7%	81.6%
From a school outside of CPS		
New to the system	7.2%	12.9%
Previously had attended a CPS school	6.1%	5.6%

Mobility that occurred during the academic year, presented in column two of Table 2, also confirms this pattern. The majority of the transfers were due to students moving from one Chicago school to another. Again, only a relatively small percentage of transferring students came from outside of the system. Thirteen percent of the transfers were new to the Chicago system.

The instability of Chicago elementary schools is therefore due, in large part, to the shifting of students within the system rather than from families moving into and out of the district. Such an internal shifting of the student population poses different constraints (and possibilities for intervention) for both schools and the district.

Characteristics of Mobile Students

Mobile students are a distinct group in comparison to their stable counterparts. Table 3 profiles these students in terms of personal and family background characteristics. Several clear trends emerge from these profiles. In general, white and more advantaged students are more likely to maintain stable school membership.[9] White students represent 15 percent of the students who attended only one school; in contrast, they are only six percent of those who went to four or more schools. The pattern is reversed for African Americans. They represent 53 percent of the stable students, but are 75 percent of the frequent movers. The trend for other minorities more closely resembles that of white students. Latinos and Asians are a smaller percentage of the frequent movers than they are of the stable students.

Table 3
Characteristics of Mobile Students

# of Schools Attended over Two Years	Race/Ethnicity				Socioeconomic Status		Family Composition			
	% White	% African American	% Latino	% Asian	% Subsidized Meals	Median Income	Mother-Father	Parent-Stepparent	Mother Only	Other
1	15.0%	52.6%	28.5%	3.7%	65.1%	$26,989	46.8%	10.3%	33.5%	9.4%
2	12.0%	54.7%	30.2%	2.9%	71.7%	$25,997	38.4%	11.6%	35.9%	14.0%
3	8.6%	66.2%	23.9%	0.8%	77.5%	$24,012	30.0%	11.5%	39.3%	19.3%
4 or more	6.1%	74.9%	17.6%	1.0%	77.8%	$22,565	21.8%	15.1%	39.9%	24.5%

With regard to socioeconomic status, stable students are less likely to receive subsidized meals (65 percent compared to 78 percent for frequent movers). The median income of the census block group in which students currently reside is also higher for stable students ($26,989 household income compared to $22,565 for frequent movers). It should be noted that even though the stable students are more advantaged than their mobile counterparts, they are still relatively poor.

Similarly, students in "mother-father" families are decidedly more stable than those in other family configurations. Over 46 percent of the stable students live in mother-father families while only 22 percent of the frequent movers are from families of this composition. The model family structure of frequent movers is that of "mother-only" households. The largest contrast, however, is in the "other" category in which neither the mother nor father is living with the

child. While only nine percent of the stable students reside in such households, almost one-fourth of the most frequent movers do.

A troubling picture emerges from this general description. Chicago elementary schools are very unstable contexts. Students move in and out of classrooms frequently, often multiple times during the same year. In addition, the mobile students tend to come from more impoverished families as well as from families with non-traditional household compositions. Thus, they are potentially disadvantaged not only by an inconsistent educational experience due to their frequent transfer but also by the lack of resources in their home environment.

Reasons for School Changes

To further understand the forces which drive the high levels of school instability, we need a sense of the various factors that contribute to student movement. Beyond factors that are associated with residential movement and are often intimately related to urban poverty,[10] families may also choose to move their children to another school. In principle, students may exit from some schools to avoid problematic environments or select alternative schools that seem especially attractive.

Data from the sixth-grade Chicago students described above provide an opportunity to sort out these potential influences. A detailed survey of over 13,000 sixth graders inquired about the reasons for their most recent school change, including whether they also changed residences. Table 4 presents a summary of their responses. As anticipated, a majority of the school changes were associated with a residential change — approximately 58 percent.[11] A significant proportion of these students, however, included school-related reasons for their move as well, such as lack of safety at the previous school or the attractiveness of the academic program of their new school. The remainder of the students, over 40 percent, report only school-related factors as the impetus for transferring to another school.[12]

Table 4
Reasons for Changing Schools*

	% of Students
Residential change only	40.4%
School-related reasons only	42.5%
Both Residential and school-related	17.1%

*Student reports, 6th grade survey

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Further distinctions can be made within the school-related factors. Several responses indicate dissatisfaction with the previous school — trouble with other students, problems with former teachers, or academic difficulties in the classroom. We will refer to these as "exit" reasons. Another group of responses is associated with the qualities of the new school — better academic programs or better sports and extracurricular activities. We will refer to these as "attraction" reasons. Table 5 displays the percentage of responses in these categories for those students who indicated only school-related reasons for transferring schools.

Table 5
School-Related Reasons for Mobility

	% of Students
Attraction	23.5%
Exit	61.1%
Both Attraction and Exit	15.4%

From the perspective of students, school transfer is clearly an exit phenomenon. They are escaping either unsafe or inadequate school environments. Sixty-one percent of students who listed only school-related reasons for moving fall into the exit category. Thus, a relatively high level of dissatisfaction is being voiced by a significant proportion of school transfers. An alternative explanation (or, at least, a complementary one) suggested that school staff may also play a prominent role in this "exit." That is, some students who are having difficulty either academically or behaviorally may be "counseled" out of a school. This implies that some of the students may have been the source of the conflict at their previous school rather than vice versa.[13]

In addition, it is important to note that these school moves tend to occur within localized geographical boundaries. The median distance that students move between schools is 2.4 miles. Fifty-nine percent of the moves are less than 3 miles.[14] These distances vary somewhat depending on the reasons for the transfer. Table 6 presents the median movement distances according to the type of move classification. Not surprisingly, residential moves tend to be of longer distances, with a median of 3.1 miles. Exit moves are the most localized, with a distance of only 1.7 miles. Thus, it appears that families who move their child because of dissatisfaction with the previous school do not, in general, search far for a new location. The question remains, however, whether they secure a school that is significantly different than the one they just left.

Table 6
Distance between Previous and Current School

Reason for Mobility	Median Move Distance in Miles
Residential	3.10
Both Attraction and Exit	2.83
Attraction	2.45
Exit	1.70

Patterns of Movement

To investigate this issue, we compared the achievement level of the schools that the students left to the achievement level of their new schools. We used this as a general indicator of the relative quality of the schools exited and entered.[15] Table 7 displays this comparison, grouping Chicago elementary schools into four quartiles. The academic achievement levels were based on the Illinois Goals Assessment Program (IGAP). For the IGAP, a score of 250 is the state norm. Most Chicago elementary schools, however, fall below this level. Only schools in the highest quartile approach this basic criterion. They have an average score of 225 or greater. Schools in the lowest quartile have scores of less than 167, almost a full standard deviation below state norms.

Table 7
Academic Achievement Level of Previous and Current Schools for Mobile Students

Previous School's IGAP Level	Current School's IGAP Level			
	Lowest Quartile	2nd Quartile	3rd Quartile	Highest Quartile
Lowest Quartile	44%	29%	20%	7%
2nd Quartile	28%	39%	21%	12%
3rd Quartile	19%	28%	38%	15%
Highest Quartile	9%	18%	20%	52%

Chi-squared = 558.7 9 df $p < .0001$

Along the left side of the table is the achievement level of the student's previous school. Across the top is the achievement level of the school to which the student transferred. The rows of the table represent the percent of students who transferred into

schools of each achievement level. The upper left cell, for example, indicates that 44 percent of students who were previously in a school with an achievement in the lowest quartile transferred into a school of the same achievement level.

A strong association between the achievement level of the student's previous school and the school to which he or she transfers is evident.[16] That is, the school that a student leaves is a strong predictor of the type of school to which he or she will transfer. The modal category for each row is, in fact, the same achievement level as that of the student's previous school. If students do not transfer to a school of the same achievement level, they are most likely to move to a school in the quartile that is adjacent to the one they just left.[17] The pattern is perhaps most striking when we compare students whose previous school was in the lowest quartile to those whose previous school was in the highest. Only seven percent of students who leave a school in the lowest achievement quartile enroll in a school from the highest quartile. Conversely, 52 percent of students who move from a school in the highest quartile transfer to another school also in the highest quartile. These students are over seven times more likely to transfer to a high achieving school than are students from the low achieving school.

The nature of movement patterns also varies based on the reasons students gave for their decision to change schools. For example, students who transferred due to the "attraction" of another school are more likely to move to a school of higher academic achievement than students who reported transferring because of a residential change. The first column of Table 8 reports the percentage of students who moved to a school of a higher achievement level (i.e., at least one cell to the right in the cross-tabulation table) for each type of movement. Students who transfer for "attraction" reasons are somewhat more likely to move to a higher achieving school than those who change schools because of exit or residential reasons. Nonetheless, it should be noted that even the attraction movers' rate of "success" is less than 50 percent.

Table 8
Relationship of Reasons for Mobility to School Achievement Level

Reason for Mobility	% Moving to Higher Achieving School	% Moving from Lowest to Highest Achieving School
Attraction	44.8%	20.4%
Exit	29.0%	7.8%
Residential	28.3%	4.9%

When we consider movement from the lowest achieving schools to the highest achieving, presented in the second column of the table, these differences are more prominent. For residential transfers, only five percent of the students move to one of the highest achieving schools. "Exit" movers are only slightly more successful in securing enrollment in the highest quartile schools if they were previously in lowest quartile schools. Although the percentage for attraction movers is four times greater than residential movers and two and one-half times that of exit movers, still only 20 percent make this upward transition.

Small Networks of Schools Exchanging Students

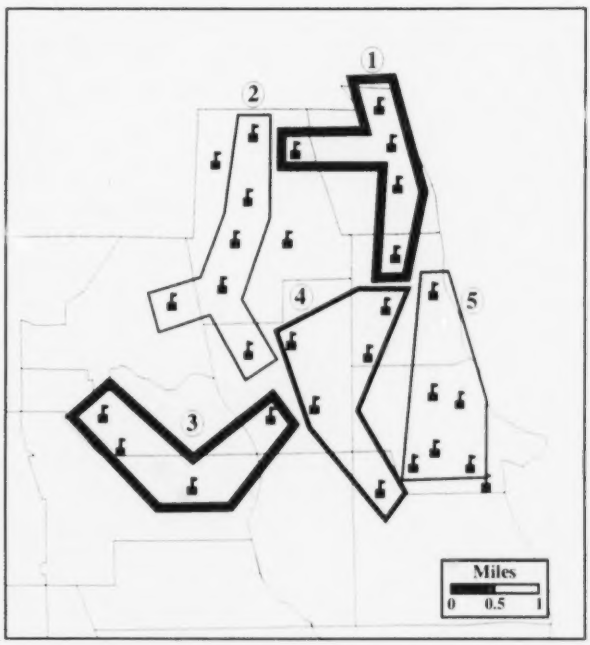
These patterns of movement between schools of similar academic quality suggests that many schools may be connected by the students that move among them. A systemic description of how students "flow" through schools, more generally, is required. One approach to this issue is to view student mobility as a network exchange problem. In the traditional network, information is exchanged; in the urban schools of Chicago, the transaction is students. Clusters of schools may be linked together by students who enter, exit, and sometimes re-enter a school during a nine-month period.

Such schools may have several factors in common. The most obvious is likely to be geographic location. As suggested by the distance students typically move between schools, networks may be community bounded. However, school networks may also share other characteristics in common beyond proximity, such as racial composition or the percentage of low-income students that they serve.

Using statistical clustering techniques, we can identify subgroups of schools that are strongly tied through the students that they exchange.[18] The results for a geographical section of Chicago are presented in Figure 2. In this particular segment of the city, five distinct exchange networks were identified. The thickness of the border surrounding each cluster represents the density of student transfers among schools in each subnetwork. For example, Cluster 1 has the most frequent number of interchanges; of the 20 possible ties between the five schools, 19 were made. On average, each school sent 21 students to each of the other schools across a two-year period. In some cases, the numbers were much higher. For example, two of the schools in the cluster exchanged 128 students over two years — the equivalent of four classrooms. In contrast to Cluster 1, the schools in Cluster 2 are linked relatively loosely. Of the 30 possible exchanges that could be made between these six schools, only 10 connections were found.

In addition, fewer students tended to be exchanged when ties were made: only 13 on average. Thus, distinctly different patterns are evident among schools in which students transfer. Again, it is important to note that this is occurring within a relatively small section of the city.

Figure 2
School Mobility Clusters



Several schools do not participate extensively in any of the networks, not even in the loosely coupled clusters. In each of these cases, the schools had a "magnet" program or were "community academies." Thus, their patterns of receiving and sending students to other schools were considerably different. For example, one magnet school near Cluster 2 did have ties to two of the schools. However, these were only receiving ties. Students did not leave the magnet school to attend other schools in the cluster.

The map in Figure 2, as anticipated, reveals that schools within the clusters are in relatively close geographical proximity to each other. However, this is not uniformly the case. Some schools are physically nearer other clusters but exchange more students with schools in an alternative network. Thus, other factors are likely to influence the connections that are observed.

In fact, the clusters vary systematically along several basic demographic and academic characteristics. These are summarized in Table 9. The most prominent commonality among schools within clusters is racial composition. The dominant ethnic/racial group in two clusters was African American students, the dominant group in two other clusters was Latino students, and the final cluster had the highest percentage of white students. Clusters that shared a common race or ethnicity were further subdivided by the percentage of low-income students that they served. Of the two African American clusters, Cluster 1 had 56 percent low-income students; Cluster 5 had 92 percent of its students from low-income families. The Latino clusters separated along similar lines; Cluster 4 serves a more impoverished student group than the Latino schools in Cluster 3. The academic achievement level of the schools appears to be perhaps a third factor distinguishing among school clusters. Achievement scores were relatively similar in the four minority school clusters. The schools in the predominately white cluster, however, had somewhat higher scores that were near state norms on the Illinois Goals Assessment Program.

Table 9
Characteristics of School Mobility Clusters

Cluster	School Characteristics		
	Predominate Racial/Ethnic Group	Percentage of Low Income Students	Average IGAP Achievement
1	42% African American	56%	209
2	47% White	31%	249
3	45% Latino	45%	211
4	53% Latino	67%	214
5	45% African American	92%	193

Combining these results with those of the previous section on the patterns of movement between schools, we can infer that student mobility in Chicago is strongly stratified. Movement in the school system is, to a large degree, bounded by achievement level, racial composition, and economic resources. Although many students change schools, they do not often cross these boundaries. The portrait that emerges, then, is one in which schools that serve large numbers of "students placed at risk" tend to lose many of their students to transfer. These students are then replaced by others who have similar risk factors. Schools that are doing better academically generally experience less student transfer and the mobile students who do enter these schools tend to come from schools that were also achieving better academically.

What Do We Know about Mobility's Effects?

Given the complex nature of student transfer and the correspondingly complicated setting for schools, we now consider the potential educational consequences. Although student mobility may have a direct impact on those students who transfer, the classrooms and schools involved may also be disrupted more generally. Therefore, it is important to consider the various levels of effect that mobility may have.

Impact on Children's Academic Growth

The existing studies of the effect of student mobility on achievement tend to indicate that a generalized decline in achievement is associated with mobility (Benson, Haycraft, Stayaert, & Weigel, 1979; Benson & Weigel, 1981; Blane, Pilling, & Fogelman, 1985; Felner et al., 1981; Johnson & Lindblad, 1991; Schuler, 1990; Wood et al., 1993). The literature is limited in several respects however. First, previous research has not focused on the intra-district mobility that occurs within urban settings (an exception to this is Ingersoll et al., 1989). Such patterns of mobility are likely to have different consequences compared to movement in other settings (e.g., see Marchant & Medway, 1987, who focused on the mobility of military children; or Straits, 1989, who concentrated on migration of families who moved more than 50 miles). Second, and perhaps most disconcerting, longitudinal data on students' achievement history is lacking. At most, these studies consider two time points. But, the effects of several school transfers may actually "accumulate" over time.

Changing schools is almost certain to disrupt, to some extent, a child's learning experience. For example, the effects of changing schools in second grade may have an "immediate" impact on achievement in that grade. A student may have an adjustment period which will be reflected in test scores during the year following a change of schools. However, this drop in learning, from what would have been expected given the student's previous achievement rate, may or may not persist. After adjusting to the new environment and perhaps making up any deficits resulting from the move, the student may return to his or her normal achievement level. That is, the student may "recover" from the effects of changing schools and resume his or her previous pattern of academic growth.

For students who experience multiple changes of schools, however, this scenario may be inappropriate. Their "adjustment period" becomes extended across years and several different schools. Thus, an additional question must also be considered: how is growth in academic ability affected *across time*? This cumulative aspect of the effect of mobility is

pertinent for single-time movers as well but may be especially prominent when considering repeated movement across several school years.

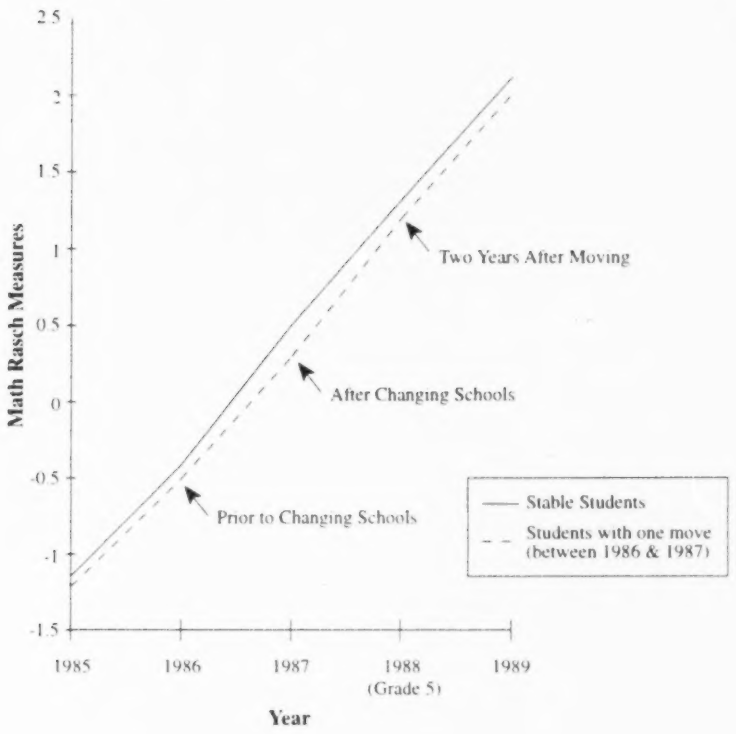
Several factors may contribute to such an effect. Students who transfer between schools may actually miss exposure to key concepts which are prerequisites for higher order skills. Although this lack of exposure may not be crucial in the particular class the student is attending, its consequences may grow as the student progresses through the grades and is required to build on previous knowledge. Such a scenario is especially pertinent in mathematics, which has a relatively logical progression in the curriculum.

In general, students' opportunities to learn depend on the pace with which new material is introduced into the curriculum (see Barr, 1974; Good & Marshall, 1984; Rowan & Miracle, 1983). Pace for the mobile student can be influenced in an unpredictable way by the new classroom that he or she enters. Their opportunity to learn may be depressed or accelerated depending on the school. However, it is questionable how well students, even those fortunate enough to enter a class at a similar point in the curriculum as previous one, will be able to take advantage of these opportunities due to their instability.

In addition, the impact of ability grouping is especially critical for mobile students. Not only do students transfer to another school, but they may also be misplaced in terms of ability group (or even an "ability class" depending on how the school is organized). The new teacher generally has limited information about mobile students; therefore, their placement into a group is not straightforward. This crucial decision will influence not only how much the students will learn but also their placement in future years (Rist, 1970; Gamoran, 1986; Sorenson & Hallinan, 1986).

These various factors intertwine in complicated ways; thus, a complete understanding of the impact of mobility entails exploring both short-term or immediate consequences and long-term or cumulative effects on academic growth. The immediate effect of mobility after a single move can be represented graphically. Figure 3 presents the average growth in math achievement of two groups: students who did not change schools and, for comparison, students who moved only once.[19] We focus on the achievement growth immediately prior to and after a change of schools. As anticipated, these students are farther behind their nonmobile counterparts after changing schools than they were in the previous year. This relative difference however is not dramatic.

Figure 3
Immediate Impact of Student Mobility



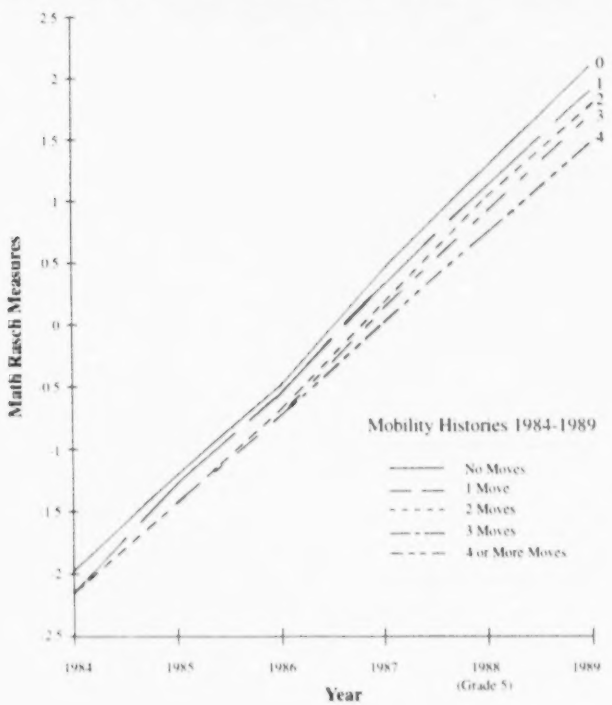
Test scores are reported in the figure on a Rasch scale that is a measure of a student's ability in math. On this scale, an increase of .80 represents approximately one year of growth for the average student. The mobile students are .09 (about 11 percent of a year) behind their stable counterparts prior to changing schools. This gap widens to .21, approximately one-fourth of a year of growth, after the move. These students also appear to "recover" in the following years to achievement levels that are comparatively similar to those prior to changing schools. This trend indicates that the immediate impact of a single move is not large, and that recovery does seem to occur.

Also interesting to note is that achievement levels of the mobile compared to nonmobile students is lower across all years. This difference is evident even before the student experiences a change of schools. This suggests that other factors associated with student mobility are independently affecting achievement. Recall that mobile students tend to be of lower socioeconomic status and to be enrolled in lower performing schools.

Many early studies of mobility did not adequately account for this relationship between socioeconomic background and school changes, and reached contradictory results about mobility's effect (e.g., Morris, Pestances, & Nelson, 1961; Stiles, 1964; Wickstrom, 1967). Ingersoll et al. (1989) and Alexander, Entwisle, & Dauber (1994) provide important counterexamples that do account for family resources and social status. Each conclude that mobility has an independent, though perhaps moderate, impact on student achievement.

As we have seen, many Chicago students experience more than one change of schools. This focuses our attention on the potential cumulative relationship between movement and math achievement for multiple movers. Figure 4 displays this relationship graphically. Each line represents the average growth trajectories for a particular group of students over time. In the first year, the trajectories separated into two groups: those who remained in the same school for the entire 1983-1984 academic year and those who moved during that year. Notice that there is an initial gap which may only partially be attributable to the effects of movement. Thus, we see a further indication that students who experience school changes have lower achievement for reasons in addition to the direct effects of the mobility itself.

Figure 4
Cumulative Effects of Mobility on Student Achievement



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As we follow the trajectories of students who move several times across their elementary school years, we find that their achievement growth is less than that of their stable counterparts. These differences increase as the number of school changes accumulates. Students experiencing numerous moves fall further behind their stable counterparts as their education progresses. The gap is approximately one full year of growth by the sixth year for those students who change schools four or more times.

For purposes of simplicity of exposition, we have only presented average achievement trends for students with different mobility histories. Obviously, some of these observed differences in achievement are due to other factors that are associated with mobility. A more detailed analysis (Kerbow, 1995b) of the data presented here estimated hierarchical linear models (Bryk & Raudenbush, 1987, 1992) of students' growth trajectories. These analyses support the findings of a direct and negative impact of mobility on student learning over time after controlling for the student's socioeconomic status. For the most disadvantaged Chicago students, frequent school changes become additional impediments in an array of other obstacles to their learning. For relatively more advantaged students who nonetheless have changed schools often, mobility appears to play an even more prominent role. In fact, their achievement level after six years of schooling tends to be closer to that of Chicago's more disadvantaged students than to other students who have a socioeconomic status similar to theirs.

Our evidence, thus, suggests that mobility has a moderate relationship to student achievement. The effect on single time movers does not seem to be particularly dramatic. The most pronounced impact is, not surprisingly, for those who change schools several times during their elementary school years. The analysis also suggests that other factors in students' lives which are likely to be associated with mobility, such as limited family resources or other life course disruptions, contribute to the negative relationship that we observe between school changes and student achievement.

At the very least, transferring between schools is another potent obstacle to learning for urban students. If these children are to make "smooth" transitions, much will depend on the support that they receive from their new school. And, as we have seen, these are generally schools that are inundated with new students throughout the year.

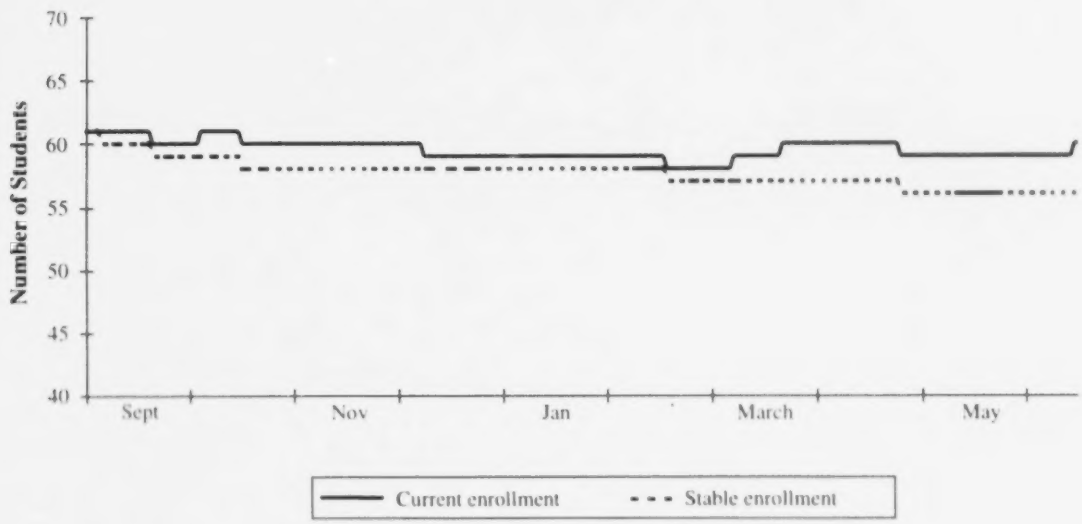
Influence on How Schools Operate

Mobility creates a situation in which teachers are faced not only with a diversity of achievement levels but also with uncertainty about what each child actually knows and can

do. This uncertainty may have broad consequences for how teachers organize the instructional activity of the classroom.[20]

Effects on classroom instruction. In order to gain a sense of how mobility affects classroom life, we graphed school enrollment across an academic year. The solid line in Figure 5 presents daily enrollment for a third grade cohort in a relatively stable school. The broken line indicates the number of students who were enrolled at the beginning of the year and continued through June. The stable enrollment declines only slightly (from 61 to 56) over the entire school year. The number of students at any given time point also remains relatively constant. As a consequence, enrollment at the end of the year is only one student less than in September.

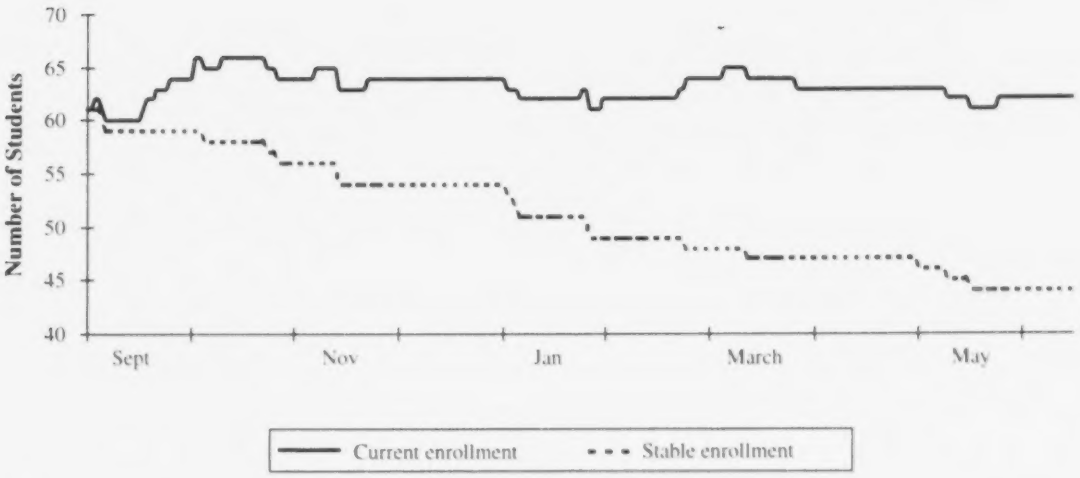
Figure 5
Student Enrollment in a Stable School: Grade 3



In contrast, Figure 6 displays the enrollment profile for a more typical Chicago third grade. As in the stable school, 61 students began in two classrooms in September. However, across the next two months, enrollment increased by 5 students. This occurred at the same time that formerly enrolled students were exiting. This trend of new students entering and others leaving continued across the school year. After nine months, 17 students had transferred to other schools and 19 new students had enrolled. Moreover, these numbers do not include two students who entered the school after September and exited prior to June.

There was seldom a continuous period of time in which the composition of the classrooms was not changing.

Figure 6
Student Enrollment in a Highly Mobile School: Grade 3



This influx and exit of students places significant constraints on the instructional approach of teachers in several ways. First, long-term instructional planning, a time-consuming process in any context, becomes more difficult. Many students for whom a unit was particularly pertinent may leave. Other students who have not been exposed to the first several weeks of the unit are likely to replace them. This exchange of students also makes assessment of instructional impact less clear as teachers are less able to observe directly the effects of their practices in many instances.

Second, the "technology culture" of instruction in unstable contexts also faces pressures that make adoption of new practices or innovations difficult. Established techniques and procedures may be employed, not because they produce desired results in particular students, but because evaluations of results are less available.[21] Classroom instruction may be focused more to a "generic" student rather than the specific composition of the class since the composition is likely to change in the next month. A recent report on Chicago teachers found that in unstable schools, teachers report lower levels of collaboration with their peers, less collective focus on student learning, and (most pertinent in this context) a lower orientation to innovation in instruction (Sebring et al., 1995). Mobility appears to impinge on

the instructional life of a school in a broad sense. It constrains the opportunity to focus on instructional practices for the long-term improvement of a group of students for which the school is collectively responsible.

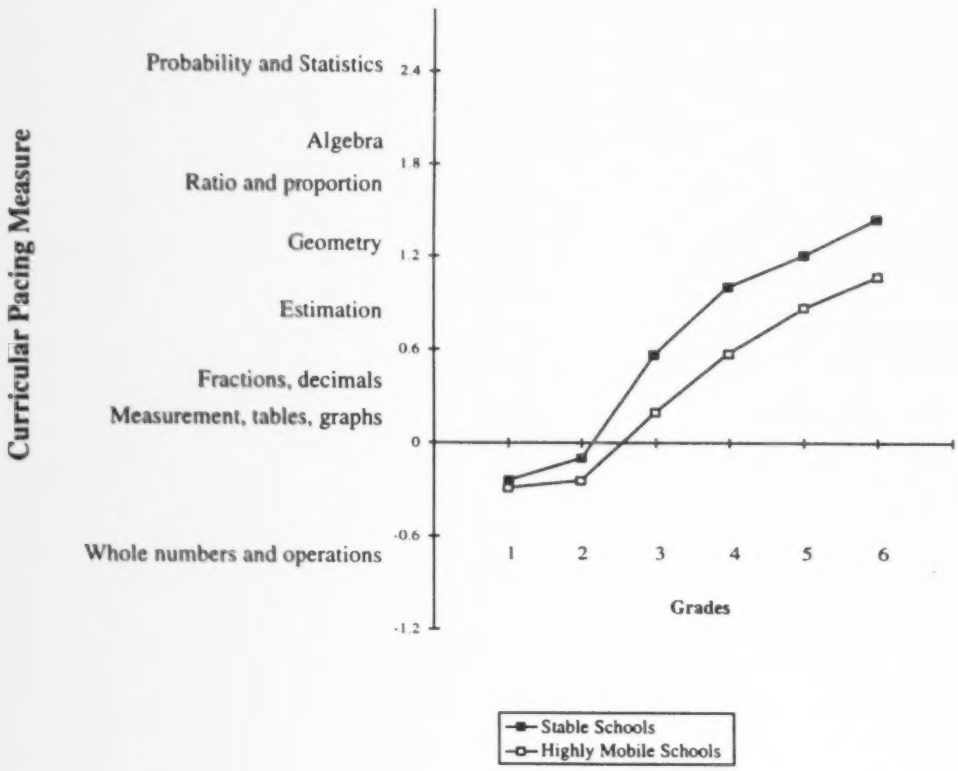
Finally, teachers may become more review-oriented in their lesson plans. New students have missed the specific instruction that preceded their arrival in the class. They have to be brought into the lesson in some way. Slowing down the pace of introducing new topics and reviewing old material is an alternative that in many respects seems to be a perfectly rational response by a classroom teacher. Thus, the introduction of new students, especially those who are weak academically, may be disruptive to the flow of instruction for all students. Data from Chicago teachers support this. Over 50 percent of Chicago elementary classrooms received four or more new students between October and May in 1994. Twenty-five percent of the classes have eight or more new arrivals after the beginning of the school year. Teachers report that approximately one-half of these students did not have the background to join the class at the level they were teaching. The instructional response of these teachers is not unexpected. Sixty-eight percent indicate that they devote portions of their lesson plans specifically to new students. Seventy-seven percent report that they review materials during class due to the entrance of mobile students. This repetition decreases the instructional pace for all students in the class.[22]

These data suggest a portrait of classroom life that is replete with disruptions as students enter and exit. Teachers' responses to these interruptions are likely to be quite varied. However, a tendency toward more routine instruction and increased review is evident. Bringing new students into classrooms increases the difficulty of tailoring instruction to the ability of the class and of making long-term plans for accelerating student learning growth. It should be noted that these data do not provide sufficient detail to describe the texture of how these classrooms operate. In-depth qualitative descriptions of the shifts in class membership and how teachers adjust to these changes over time could expand our understanding of this crucial process.

Impact on the school. Beyond the particular class, increased review by individual teachers will also affect the progression of subjects across grades. Even if teachers attempt to coordinate their curriculum with the previous teacher, the students that they receive at the beginning of the year may be quite different than the students who were at the school at the end of the spring semester. Further review and additional reduction in instructional pacing may be introduced from grade to grade in order to accommodate the variation and uncertainty in student learning. The overall effect will "flatten" curriculum pacing.

We examined this by considering teachers' reports about their content emphases in math instruction. From these teacher survey reports, we created a measure of the introduction of new topics into the curriculum. Taken together across the grades, this measure represents the "curricular pace" of the school.[23] Figure 7 presents the median emphasis for each grade level for stable schools (with mobility rates in the highest quartile for Chicago schools) and for highly mobile schools (with mobility rates in the lowest quartile).[24] In order to account for the characteristics of the students served, which may also affect curricular pace, only schools with over 70 percent low-income students were included in the analysis.

Figure 7
Curricular Emphasis in Stable and Highly Mobile Schools



Without elaborating on technical details, the general pattern is very clear. The curricular pace of more stable and highly mobile schools is quite different. Although instructional content appears similar in first grade, a pacing gap becomes evident by second

grade. This discrepancy widens across the next two years and reaches its largest difference by fourth grade. The mobile classrooms, in fifth grade, actually have a level of emphasis equivalent to fourth grade emphasis in the stable schools. Although the gap narrows slightly during the upper grades, the mobile schools continue to lag behind their stable counterparts by approximately one grade level throughout these years.

It is important to emphasize that this "flattening" of curricular pace limits the amount of material to which all students are exposed, not just mobile students. This suggests that mobility will have a larger organizational impact on learning that extends beyond the individual and the classroom. This effect may be manifested in more general school and system achievement trends.

The "flattened" pattern of curricular pacing is not unexpected for the mobile schools. These schools encounter multiple obstacles in coordinating their instruction. They serve students who often begin school less prepared and do not have access to services and resources that are available in more affluent communities. Even if these student bodies were stable, accelerating the instructional pace would require effort. Added to these difficulties is the fact that students are constantly moving in and out of their classrooms — precipitating additional review and teacher attention.

Despite these multiple constraints, schools that experience high levels of mobility nonetheless seek to undertake broad instructional and curricular restructuring as promoted by recent reforms. Such innovation will actually create additional stress for the school. Two demands stand in tension: improving the instructional sequence for its current students and the opposing tendency to revert to a more review-oriented, flattened pace that will more easily accommodate a transient student population.

Accelerating the instructional pace for stable students would seemingly exacerbate problems for new students transferring to the school, who would then be even further behind the classrooms that they join. Thus, the more successful a school is in improving the curricular pace and perhaps also the learning growth of its stable students, the more stark this tension is likely to become. Focusing attention on mobile students, on the other hand, takes human resources from continued instructional and organizational development. Consequently, a school in an unstable urban context that wishes to improve instruction confronts a dual task: maintaining appropriate pace and emphasis for its continuing students and incorporating the mobile students that will inevitably enter its classrooms into the mix without sacrificing the learning of the other children.

Policy Implications

Mobility is a topic that frequently surfaces in discussions about the problems of urban schooling. Surprisingly, it tends to fade from the agenda as discussion turns toward reform initiatives and school restructuring. Student mobility and the resulting school instability are typically relegated to a background condition — part of an external context to which schools must adjust. Nevertheless, mobility's effects can be deep and pervasive. They penetrate the essential activity of schools — the interaction of teachers and students around learning. Moreover, as we have seen, not only does mobility affect those students who are changing schools, it also more generally disrupts the functioning of classrooms and the basic operations of schools. This is not to argue that simply reducing student mobility will necessarily translate into school improvement. Stable schools can also deliver poor quality instruction to their students. Stability, however, provides a base condition on which a school can build and modify successful programs. Without a certain level of stability, it is unclear how school-based educational programs, no matter how innovative, could successfully develop and show long-term impact.

Mobility is a phenomenon that is deeply embedded in the urban context and in urban schools. Thus, no one policy approach alone is likely to reduce its prevalence and to ameliorate its effects. The analyses presented in this paper suggest that an array of policy issues merit consideration. Discussions should focus on two levels: policies that can assist in decreasing the level of mobility between schools, and initiatives that can mediate the negative impact of student mobility on learning and support school improvement efforts more generally.

Reducing Student Mobility

Mobility in Chicago public elementary schools, and perhaps other urban districts, is largely an internal phenomenon. An overwhelming majority of students are shifting *within* the system. Even those who appear to be new to the system have often spent previous years at a Chicago school. Consequently, Chicago and other similar districts may have an opportunity to reduce current levels of transfer. Mobility is not imposed wholly from factors external to schooling or to the school district.

Although much of the transfer between schools is associated with changes of residence, a significant proportion of the moves is not linked to such changes. Rather, transfers are prompted in large part by student and parent dissatisfaction with the previous school and in some cases may even be encouraged by school staff. Almost one-third of the

students who change schools in Chicago report an "exit" from a location in which they had some form of conflict. A significant aspect of movement, therefore, relates to the weak and sometimes adversarial social ties that schools have with families in their community. Drawing families into more open and personal ties with the school would seem likely to reduce their dissatisfaction. Even when conflicts do arise, the possibility for a satisfactory solution will increase and the likelihood of exit will be reduced.

Beyond this, if schools and districts provide information to parents about the potentially harmful effects of frequent changes of schools, sensitivity to these concerns would elevate. It is important to note that this is not a suggestion simply to better educate parents about the negative impact that frequent changes of school may have on their child's learning. The reasons driving many of the school changes indicate a deeper impediment to establishing more stable environments for children than general education of the public could address. To be productive in reducing mobility, information must flow through the schools and become a part of established relationships with families.

Another key finding of the analysis is that school transfers tend to be localized geographically. The majority of moves, regardless of cause, are to schools located less than three miles from the previous location. A straightforward alternative open to school districts, therefore, is to make it easier for students to remain in their previous school even if they have changed residences. In many cases, this would create a manageable alternative for families since the distance to the previous school is not significantly more than that to the new school the student might attend. Again, local dissemination of information to parents would be essential.

In schools with high mobility, there should be an aggressive campaign to "hold students." Support may have to be offered through busing or assistance in securing public transportation in order to significantly reduce instability. In cases where a group of schools exchange a large number of students, such as the clusters that were identified in the analysis, this activity may need to be coordinated. Principals, for example, could work together to refer students back to their previous school when transfer requests are made. Information about transportation alternatives could also be jointly organized.

Again, the issue of the social ties of a school with families in its community is a central concern even when the moves are not associated with dissatisfaction with a previous school. Families have to have some meaningful association with a *particular* school to want to keep their children there. This is not necessarily a straightforward task in urban neighborhoods. Concerns for personal safety are sometimes paramount. Residential mobility

is high as families seek better housing and a safer place for their children. This insecurity and transience weakens the social ties necessary to bind neighborhoods together and often extends to the interactions of residents with their public institutions, including schools. To counteract this general loss of connectedness, schools may have to take on increased responsibility to strengthen the social links among parents and the school itself, working actively to develop relationships.

Clearly, urban children would benefit from a more consistent home and school social environment that promotes their personal well-being and creates a supportive context for learning. Unless this happens, the academic efforts of schools will almost certainly be frustrated. High levels of student mobility between schools necessarily disrupts the crucial relationships that need to be developed.

In actuality, there is some circularity to this argument. High mobility reduces the possibility for developing significant social ties with families; the lack of social ties with families contributes to the levels of high mobility in urban schools. To promote significant reform in urban schools, this circle has to be broken.

Mediating the Negative Impact of Mobility

Given the structure of metropolitan settings and the economic and social pressures of urban environments, some level of mobility is unavoidable, even if the advice above is followed. Therefore, schools must explicitly plan for the entrance and exit of a portion of their student body each year. A crucial aspect of this transition is better understanding the background knowledge and skill of entering students and where best to place them in new classrooms. Since the overwhelming majority of students are moving within the system, an array of "archival" material exists about student background and previous achievement history. Therefore, efforts to facilitate the flow of this information could provide a preliminary "portrait" of the child for the local school.

Unfortunately, the amount of useful information that can be routinely garnered from the data that are typically available, such as standardized test scores or other formal evaluations, is limited. These data are often dated or not detailed enough to inform school staff about a student's current needs or to provide direction for instructional decisions once a child is incorporated into a classroom. Information about the child's previous curriculum and his or her performance in relation to that curriculum would be most pertinent. This implies perhaps some form of portfolio from the child's previous school that can be produced

by the teacher or other staff who worked directly with the student. Rather than being an additional document that is created whenever a child leaves one school for another, a local portfolio assessment, for example, could be maintained on each child that follows wherever he or she goes, be it from third to fourth grade in the same school or to a different fourth-grade classroom in another school. In networks of schools that tend to exchange students, this could also include communication between classroom teachers at the previous and new school. If this discussion is focused around a documented information base, crucial connections can be continued in the child's instruction.

Beyond the availability of pertinent data, schools have to be in a position to use this information productively. The responsibility for incorporating new students into schools, however, typically falls to the classroom teacher, who may have several other "new" students at any given point. Finding the time to thoroughly assess these students while concurrently maintaining the instructional flow of the class will likely be a daunting task. If these students need additional support in order to participate on the same academic level as their new classmates, the burden becomes compounded. Even with a detailed portfolio of the student's previous work, the productive integration of mobile students will require a broader strategy.

This suggests the necessity of a schoolwide approach to bringing new students into schools. Such an approach may include an initial assessment that is sensitive to the specific curriculum of the school. Particular weaknesses or gaps in the student's knowledge base could be identified and addressed through individual tutoring or some other form of support that occurs in parallel to basic classroom instruction. As suggested, this would be a structural change in the organization of the school to meet both the needs of incoming students and to support classrooms that are receiving new students.

If schools (and school districts) are able to reduce levels of mobility and provide organizational features that incorporate new students into classrooms with proper assessment and support, attention can be more productively given to the pace of basic instruction at the school. Mobility, as well as other factors in urban schools, tends to depress this pace and, consequently, the opportunity for students to excel. Making broad curricular changes is difficult in any context, but especially so when the students for whom the changes are ultimately intended do not participate long enough to benefit. A more stable environment affords schools the opportunity to put new programs or instructional emphases in place and to observe their impact on students over time. Without a certain level of stability, self-evaluation and strategic planning for future change are compromised. Programs which could have been successful may be abandoned prematurely; others that are only moderately productive may continue through inertia.

In urban districts that have devolved considerable authority to the local school, many programs, both national and local, are likely to be adopted as schools seek to upgrade the quality of instruction and services they provide to the students in their community. This has clearly been the case in Chicago (Bryk et al., 1993). Taken separately, each of these new programs may be quite worthwhile and provide a boost to the school in which they are adopted. With the plethora of new programs in a district, however, comes additional diversity between schools. For example, a thoroughly phonics-based reading program in one school may sit next to a decidedly whole-language approach in another. An occasional exchange of students between these programs may be unproblematic. If these two schools are part of a dense network of student exchanges, however, the stress on the separate programs (as well as the students) might be quite troublesome. Without addressing this structural condition, the success of each school's program may be called into question. Schools may be unable, on their own, to buffer themselves from their environment in order to carry on the complex work of restructuring.

An initial response to this concern by a school district may be to consider a form of standardized curriculum. Students who changed schools would, then, at least formally, be at the same point of instruction when they changed schools, and teachers could assume that they had been exposed to particular topics at each grade level. Several problems exist with this alternative, however. Coordinating such an initiative over a large set of schools, from a managerial perspective, is not straightforward. Schools are "loosely coupled" organizations (Bidwell, 1965; Gamoran & Dreeben, 1986; Meyer & Rowan, 1978; Weick, 1976). Directives from higher levels in a district do not always penetrate to the classroom. Thus, in practice, uniformity between schools may be difficult to ensure. Beyond this concern, urban districts serve diverse populations of students and it is unclear whether a "standard" curriculum would meet their various needs.

This, in fact, was one of the primary impetuses toward decentralization. Schools, given sufficient control, could be responsive to the interest and values of their local neighborhood. This flexibility creates a sense of ownership among local actors and provides a more direct avenue for accountability to the school's constituency. A broad, centralized directive such as a uniform curriculum would be in conflict with much of these efforts.

As an alternative approach, the multidimensional policies suggested above in many ways address the concerns of incompatibility between schools. Strengthening the social ties of urban schools with their communities and developing plans to support families in maintaining their child in the same school (even after changing residences) can assist in reducing the high levels of instability. Creating portfolios of students' work that can follow

them to new schools and developing schoolwide approaches to incorporating new students into classrooms can help to mediate mobility's impact. Under these conditions, schools will have information about children's previous educational experiences and will have a systematic approach to bringing these students into their classrooms. Nevertheless, in some instances, these measures may be insufficient, particularly in a network of schools that exchanges large number of students. In such cases, schools may need to explore commonality in their approaches to instruction. This would entail a more localized coordination of curriculum rather than a broad district mandate.

Whichever route districts and schools take, if successful systemic changes and development of quality education for urban children are to move forward, the issues surrounding student mobility have to be confronted directly. Its effects are too pervasive. Left as a "background condition," mobility becomes an intrusive factor in the life of schools that will impede student learning and school improvement more generally.

Endnotes

1. A policy report by the Council for Aid to Education (Miller et al., 1992) and a publication from the U.S. General Accounting Office (1994) are perhaps the only exceptions. They both raise important issues but are limited in the data that they are able to bring to bear on the topic.

2. The factors associated with mobility in high schools may be quite different than those of elementary schools. Classes are much more fluid at the secondary level with internal changes of schedules by students as well as students who enter and leave the school. In addition, school leavers may not only be exiting the particular school that they are attending but also be exiting "school" more generally.

3. This is the statistic used in Illinois. The total enrollment of the school is taken to be the "average daily membership." Other states and districts use the beginning-of-year or end-of-year enrollment. See Ligon & Paredes (1992) for a detailed listing of the various formulas that are used.

4. The relationship between the various components of mobility and how they may serve as early indicators of school improvement as a school is able to maintain, and even attract, students in its community are discussed more extensively in Kerbow (1995a).

5. The stability rates are computed by dividing the number of students in a school in both September 1993 and September 1994 (i.e., those who were stable) by the total number of students who were enrolled in the school in September 1993 (i.e., including those who were stable and those who left the school before September 1994). Students that made a "natural" progression out of the school, for example, eighth graders in September 1993 who enrolled in a high school the following year, were removed from the calculation. Because of the September to September time period, this statistic includes both mobility over the summer months and during the school year.

6. These students are a stratified, random sample of public elementary schools and sixth-grade students in the Chicago Public Schools in the spring of 1994. The students and schools (N=13,908 students; N=270 elementary schools) are representative of the CPS in both their racial composition and the percentage who are from low-income families. The students' mobility histories were taken from the School Administrative History files provided by the Chicago central office.

7. It is important to note that school changes that were "forced" for administrative reasons were not included. For example, transfers of students who had previously attended an elementary school that was kindergarten through fifth grade and moved to another school to attend sixth grade were not counted as moves.

8. These students often had spent a short period of time either in a parochial school in the Chicago area or in a suburban district. A small percentage had returned to their native country (e.g., Mexico) and re-enrolled in the CPS in 1993-1994.

9. It should be noted that because of the sampling design, students who were in a Chicago public elementary school but left the system before sixth grade are not included in these statistics. A longitudinal study of Baltimore school children (Alexander, Entwisle, & Dauber 1994) found that those students who did exit the system were even more economically advantaged than stable students who remained.

10. Unemployment and the shortage of low-cost housing may lead families to move to less expensive quarters or to move in with relatives. Immigrant status often entails temporary housing arrangements and frequent moves. Finally, changes in family composition due to divorce or other factors such as family violence may lead to relocation. Rossi (1980) is a standard reference for family residential mobility. Schumaker & Stokols (1982) and Gramlich et al. (1992) provide additional perspectives on intra-urban residential mobility.

11. The school system does not maintain a historical record of address changes. Although reporting from students is not ideal for establishing the percentage of school changes that are due to residential moves, it does provide a sense of the magnitude of problem.

12. The questionnaire asked a series of detailed questions about students' mobility history during the previous two years. These included the number of residences the student had in the last two years, the number of schools the student attended during this period, and the reasons for the student's most recent change of schools (again, limited to a two-year time period). This last survey item concerning reasons leading to school transfer was developed in connection with student focus groups. Sixth-grade students had clear and sometimes vivid descriptions of their reasons for mobility. Based on these discussions, we were able to write a closed-ended question that tapped these reasons. Field tests and further interviews with students confirmed the item's reliability.

13. An anonymous reviewer suggested this interpretation. Anecdotal reports from principals and administrators also suggest this as a contributing factor in student mobility. Unfortunately, we do not have systematic information to quantify its influence.

14. Chicago, in fact, has formally adopted an "open enrollment" policy. Under this policy, students who move out of a school's specified boundaries may continue to attend that school, provided that their new homes are within a five-mile radius of the school. To a large extent, however, the policy has not been publicized. Individual schools, primarily the principal, continue to make decisions about the enrollment of students who are outside their geographical boundaries.

15. An analysis was also done based on the reported safety level of schools that students left and entered. The results were strikingly parallel to those presented above. Students tend to move between schools of similar quality in regard to safety and academic performance.

16. A log linear model was fit for this table and a Chi-square test of the independence of the academic level of previous and current schools was computed. The probability that the academic level of the school the student left is unrelated to the academic level of the school he or she entered is less than .0001.

17. Moving to a school in a higher quartile is a rather large step although it assures, in most cases, that the move actually is a substantive change in school achievement level. We can relax the definition of what constitutes a move to a higher achieving school to gain a more detailed picture. The observed pattern, however, remains the same. Approximately 36 percent of the transferring students move to a school that has an IGAP score that is 20 points higher. This is about one-fifth of a standard deviation on the IGAP. Forty-two percent of the students move to a school that is within 20 points on the IGAP in comparison to their previous school. Another 21 percent transfer to a school with lower achievement. Thus, the majority of school changes, even at this more fine-grained level, are lateral or downward.

18. Cluster analysis distinguishes subgroups (or clusters) based on an analysis of a matrix whose elements indicate the strength of association between each school (in this case, the number of students exchanged between any two schools). The number of ties that a school has with other schools in a given subgroup has a hypergeometric distribution. Given a known distribution which characterizes a school's ties to a given subgroup of schools, we can calculate a standardized measure of association between any school and all subgroups. The measure would be: observed connections minus expected connections divided by the variance of the number of connections. This measure can be summed for all schools in a subgroup to provide a standardized measure of group association or "compactness."

Using the standardized measure of association with each group, we can reassign schools to the subgroup to which they are most closely associated. From this, an iterative partitioning clustering, or steepest ascent algorithm, can be developed which assigns schools to the subgroup with which they have the closest association (Aldenderfer & Bashfield, 1984). The algorithm utilized in this analysis moves one school at a time, choosing the school

which could gain the most (in standardized units) by moving from its current subgroup to its optimal subgroup (Frank, 1993).

19. The data employed in the analysis were from the fifth grade cohort of Chicago students from the 1987-1988 school year, containing over 30,000 students. Information about their academic progress was then collected from preceding years. The data represent a longitudinal period from 1984 to 1989, spanning six grades for most students. A random sample of 2,669 students was selected from the population for analysis.

The achievement measure for mathematics is derived from the annual Iowa Tests of Basic Skills scores of the students. These scores were transformed into a Rasch metric which resulted from an equating study across both years and levels of the tests (see Lee, 1992). Consequently, this measure is appropriate for comparison of ability across years, which is essential to the longitudinal analysis.

20. Lash and Kirkpatrick (1990) provide the only sustained attention to the classroom effects of mobility in urban schools.

21. Of course, uncertainty in teaching is not solely due to student mobility. Its sources are multiple (Lortie, 1975, Rosenholtz, 1986). Mobility, however, is external to the control of teachers.

22. These data are from a survey of Chicago teachers conducted by the Consortium on Chicago School Research in 1994. The survey was a stratified, random sample of Chicago teachers and schools that included 6,200 teachers in 266 elementary schools. See Sebring et al. (1995) for a description of the survey design.

23. Information on curricular emphases was obtained through a survey of Chicago teachers (Frank, Hermanson, & Camburn, 1991). Data were available on 2,519 teachers. They responded to questions about subject-related topics covered in class, indicating on a four-point scale the frequency of emphasis on each area (ranging from less than once a week to daily). A Rasch model was used to create a composite variable for each teacher in which higher values represent more advanced topic coverage. Each item (or topic emphasis) is also scored and can be directly related to the teachers' measures. (See Smith, 1993 for a fuller description of this variable as well as other measures of instructional practice.)

The following interpretation can be given to the teachers' measures at each grade level. Topic emphases that fall below the curriculum measure for a grade are covered frequently by the teacher while topics above the measure are less likely to be reported as receiving frequent attention. At first grade, for example, a strong emphasis on "whole numbers and operations" is reported. Topics of a more advanced nature are not frequently addressed. In addition, increased emphasis on more difficult topics during second grade is not evident. However, the lines become steeper between third and sixth grade, indicating significant increase in topic introduction. They begin to level again during the upper grades, that is, smaller amounts of new material are introduced during these years.

24. Unfortunately, archival data were not available to compute stability rates for the 1990-1991 school year from which the teacher survey data was drawn. Therefore, we used the "mobility rate" reported by the school district for that year.

References

Aldenderfer, M.S. & Bashfield, R.K. (1984). *Cluster analysis*. Newbury Park, CA: Sage.

Alexander, K.L., Entwisle, D.R., & Dauber, S.L. (1994). *Children in motion: School transfers and elementary school performance*. Paper presented at the American Sociological Association Annual Meeting, Los Angeles, CA.

Barr, R. (1974). Instructional pace differences and their effect on reading acquisition. *Reading Research Quarterly, 9*, 526-54.

Benson, G.P. & Weigel, D.J. (1981). Ninth grade adjustment and achievement as related to mobility. *Educational Research Quarterly, 5*, 15-19.

Benson, G.P., Haycraft, J.L., Steyaert, J.P., & Weigel, D.J. (1979). Mobility in sixth graders as related to achievement, adjustment, and socioeconomic status. *Psychology in the Schools, 16*, 444-47.

Bidwell, C.E. (1965). The school as a formal organization In J.G. March (Ed.), *Handbook of organizations* (pp. 972-1022). Chicago, IL: Rand McNally.

Blane, D. (1985). A longitudinal study of children's school mobility and attainment in mathematics. *Educational Studies in Mathematics, 16*, 127-42.

Bryk, A. & Raudenbush, S. (1987). Application of hierarchical linear models to assessing change. *Psychological Bulletin, 101*, 147-58.

Bryk, A. & Raudenbush, S. (1992). *Hierarchical linear models for social and behavioral research: applications and data analysis methods*. Beverly Hills, CA: Sage.

Bryk, A. et al. (1993). *A view from the elementary schools: The state of reform in Chicago*. Chicago, IL: Consortium on Chicago School Research.

Elmore, R. et al. (Eds.) (1990). *Restructuring schools: The next generation of education reform*. San Francisco, CA: Jossey-Bass.

Felner, R.D., Primavera, J., & Cauce, A.M. (1981). The impact of school transitions: A focus for preventive efforts. *American Journal of Community Psychology, 9*, 449-59.

Frank, K. (1993). *Identifying cohesive subgroups*. Unpublished doctoral dissertation, University of Chicago.

Frank, K., Hermanson, K., & Camburn, E. (1991). *Charting reform: The teachers' turn — Users manual*. Chicago, IL: Consortium on Chicago School Research.

Gamoran, A. (1986). Instructional and institutional effects of ability grouping. *Sociology of Education, 59*, 185-96.

Gamoran, A. & Dreeben, R. (1986). Coupling and control in educational organizations. *Administrative Science Quarterly, 31*, 612-32.

Good, T.L. & Marshall, S. (1984). Do students learn more in heterogeneous or homogeneous groups? In P.L. Peterson, L.C. Wilderson, & M.T. Hallinan (Eds.), *The Social Context of Instruction* (pp. 15-38). Orland: Academic Press.

Gramlich, E., Laren, D., & Sealand, N. (1992). Moving into and out of poor urban areas. *Journal of Policy Analysis and Management, 11*, 273-87.

Ingersoll, G.M., Scamman, J.P., & Eckerling, W.D. (1989). Geographic mobility and student achievement in an urban setting. *Educational Evaluation and Policy Analysis, 11*, 143-49.

Johnson, R.A. & Lindblad, A.H. (1991). Effect of mobility on academic performance of sixth grade students. *Perceptual and Motor Skills, 72*, 547-52.

Kerbow, D. (1995a). *Pervasive student mobility: A moving target for school improvement*. Chicago, IL: Chicago Panel on School Research.

Kerbow, D. (1995b). *School mobility, neighborhood poverty, and student academic growth: The case of math achievement in the chicago public schools*. Paper presented at the Workshop on the Study of Urban Inequality, University of Chicago, Chicago, IL.

Kerbow, D. (1993). *Instructional practice and student mobility: Networks of student exchange in inner-city schools*. Paper presented at the American Education Research Association Annual Meeting, Atlanta, GA.

Kirst, M.W. (1988). Recent state education reform in the United States: Looking backward and forward. *Educational Administration Quarterly, 24*, 319-328.

Lash, A.A. & Kirkpatrick, S.L. (1990). A classroom perspective of student mobility. *Elementary School Journal, 91*, 177-91.

Lee, O.K. (1992). *Measuring mathematics and reading growth*. Unpublished doctoral dissertation, University of Chicago.

Ligon, G. & Paredes, V. (1992). *Student mobility rate: A moving target*. Paper presented at the American Education Research Association Annual Meeting, San Francisco, CA.

Lortie, D. (1975). *Schoolteacher: A sociological analysis*. Chicago, IL: University of Chicago Press.

Meyer, J.W. & Rowan, B. (1978). The structure of educational organizations. In M.W. Meyer (Ed.), *Environments and organizations* (pp. 78-109). San Francisco, CA: Jossey-Bass.

Meyer, R.H. (1992). *Can schools be held accountable for good performance? A critique of common educational performance indicators*. University of Chicago, Harris School of Public Policy, typescript.

Miller, L.S., Fredisdorf, M., & Humphrey, D.C. (1992). *Student mobility and school reform*. New York: Council for Aid to Education.

Morris, J.L., Pestaner, M., & Nelson, A. (1967). Mobility and achievement. *Journal of Experimental Education, 35*, 74-80.

Passow, A.H. (1989). Present and future directions in school reform. In T.G. Gergiovanni & J.H. Moore (Eds.), *Schooling for tomorrow: Direction reforms to issues that count* (pp. 13-39). Boston, MA: Allyn and Bacon.

Porell, F.W. (1982). *Models of intraurban residential relocation*. The Hague: Kluwer.

Rist, R. (1970). Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. *Harvard Educational Review, 40*, 411-51.

Rossi, P. (1980). *Why families move. 2nd edition*. Glencoe, IL: Free Press.

Rowan, B. & Miracle, A.W. (1983). Systems of ability grouping and the stratification of achievement in elementary schools. *Sociology of Education, 56*, 133-44.

Rosenholtz, S. (1989). *Teachers' workplace: The social organization of schools*. New York: Longman.

Schuler, D.B. (1990). Effects of family mobility on student achievement. *ERS Spectrum, 8*, 17-24.

Sebring, P.B. et al. (1995). *Charting reform: Chicago teachers take stock*. Chicago, IL: Consortium on Chicago School Research.

Shumaker, S.A. & Stokols, D. (1982). Residential mobility as a social issue and research topic. *Journal of Social Issues, 38*, 1-19.

Simmons, R.G. & Blyth, D.A. (1987). *Moving into adolescence: The impact of pubertal change and school context*. New York: Aldine/Hawthorne.

Smith, J.B. (1993). *Teacher power and teacher practice*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, GA.

Sorenson, A.B. & Hallinan, M.T. (1986). Effects of ability grouping on growth in academic achievement. *American Educational Research Journal, 23*, 519-42.

Stiles, G.E. (1968). Families on the move. *Educational Forum, 32*, 467-74.

Straits, B.C. (1987). Residence, migration, and school progress. *Sociology of Education, 60*, 34-43.

Weick, K. (1976). Educational organizations as loosely-coupled systems. *Administrative Science Quarterly, 221*, 1-19.

Wickstrom, R. (1967). Pupil mobility and school achievement. *Alberta Journal of Educational Research, 13*, 311-18.

Wood, D., Halfon, N., Scarlata, D., Newacheck, P., & Nessim, S. (1993). Impact of family relocation on children's growth, development, school function, and behavior. *JAMA, 270*, 1334-1338.

U.S. Bureau of the Census. (1992). *Geographical mobility: March 1990 to March 1991* (Current Population Reports, Series P-20, No. 463). Washington, DC: U.S. Government Printing Office.

U.S. General Accounting Office. (1994). *Elementary school children: Many change schools frequently, harming their education*. Washington, DC: U.S. Government Printing Office.

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